AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method for forming a porous insulating layer, comprising:

a solution-applying step of applying a solution in which a silicon nitride insulating material is dissolved onto a workpiece;

a solidified layer-forming step of forming a solidified layer by cooling the solution applied onto the workpiece to a temperature less than or equal to the melting point of a solvent contained in the solution;

a drying step of removing the solvent contained in the solidified layer by vacuum drying the solidified layer to make ~~the~~ a solidified porous layer ~~porous~~;

a firing step of hardening the solidified porous layer obtained by the drying step; and

an airtight treatment step of exposing the solidified porous layer to a high temperature with a ~~flushing~~ flashing device to melt a surface of the solidified porous ~~insulating~~ layer to eliminate the air permeability of the solidified porous layer.

2. (Previously Presented) The method for forming a porous insulating layer according to Claim 1, wherein, in the solution-applying step, the solution is applied to cover unevenness of the surface of the workpiece, and to flatten the surface of the applied layer.

3. (Original) The method for forming a porous insulating layer according to Claim 1, wherein the drying step is performed under a reduced pressure.

4. (Original) The method for forming a porous insulating layer according to Claim 2, wherein the drying step is performed under a reduced pressure.

5. (Original) The method for forming a porous insulating layer according to Claim 1, wherein the solidified layer-forming step is performed after part of the solvent is removed from the solution applied onto the workpiece.

6. (Cancelled)

7. (Cancelled)

8. (Previously Presented) The method for forming a porous insulating layer according to Claim 1, wherein the application of the solution to the workpiece comprises slit coating.

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Currently Amended) A method for forming a porous insulating layer, comprising:

applying a solution containing a silicon nitride insulating material onto a substrate;

cooling the solution to a temperature less than or equal to the melting point of a solvent contained in the solution to form a gel layer;

vaporizing the solvent contained in the gel layer by vacuum drying to make a solidified porous layer ~~porous~~;

hardening the solidified porous layer; and

melting a surface of the solidified porous layer to eliminate the air permeability of the solidified porous layer by instantaneously exposing the solidified porous layer to a high temperature with a ~~flushing~~ flashing device.

14. (Previously Presented) The method of claim 13, wherein the step of vaporizing the solvent comprises sublimation of the solvent.

15. (Cancelled)

16. (Cancelled)

17. (Currently Amended) The method of claim 13, wherein the solidified porous layer comprises a porosity of 90%.

18. (Cancelled)